muscular slip runs up each side of the sac, which opens by a very short stalk with a small indication of a cæcum. Distally, the sac tapers considerably.

(2) *Male.*—Testes, small paired bodies, very similar macroscopically to the ovaries in the 10th and 11th segments. A similar pair of bodies may be found often in the 12th segment. The ciliated external openings of the vasa deferentia are very clearly marked, but the ducts themselves can only be traced backwards in sections. The ducts are remarkable in that they never unite with one another, but run back in the body-wall parallel and close to each other till they reach, and separately enter, the duct leading from the prostate gland to the exterior. The prostate glands are largely developed in the 18th segments, and from them the paired ducts run down to open externally on the small papillæ.

The *vesiculæ seminales* vary in development in different specimens. They form white, solid, racemose bodies, in which the spermatozoa are seen in various stages of development. They may be found connected with the faces of the septa, in the 11th, 12th, 13th, and 14th segments, and can always be distinguished macroscopically from the testes and ovaries by the definite position and size of the latter.

Art. XVII.—*Description of some Hitherto Unknown Australian Plants.*

By Baron von Mueller, K.C.M.G., M.D., Ph.D., F.R.S.

[Read December 12, 1887.]

Acacia Baileyana.

Arborescent; branchlets prominently angular, somewhat furrowed, glabrous or beset with short spreading hairlets; leaves bi-pinnate, almost sessile or on very short stalks, glabrous or the main-rhachis bearing hairlets when young, as well as the branchlets and flower-stalks somewhat whitish from ceraceous bloom; pinnules usually in three or

four or sometimes in two pairs, oval or broad-elliptic in outline, almost sessile, a very conspicuous depressed glandule between each pair; leaflets in from four to twenty closely approximated pairs, sessile, rather short, linear, flat, blunt at the base, slightly acute at the apex, their carinular venule faint; rhacheole greenish-margined; headlets of flowers small, in elongated almost glabrous axillary and also paniculate terminal racemes; bracts minute, ciliolated, their upper portion suddenly roundish-dilated; calyx bluntly short-lobed, hardly half as long as the deeply five-cleft corolla; fruit straight, broadish, almost flatly compressed, smooth, rather elongated, at both ends blunt, along the anterior side dehiscent; pericarp cartilaginous-chartaceous; seeds oblique-pendent, ovate-elliptic, much compressed, black, with hardly any lustre, their areole on each side large; arillar appendage pale, cymbous-semiorbicular, less than half as long as the seed; funicle comparatively short, slightly twisted.

A small tree of particularly graceful aspect; leaves crowded; well developed pinnules about one inch long; leaflets generally from $\frac{1}{16}$ to $\frac{1}{20}$ inch broad; headlets on very thin stalklets of double or triple their length, containing from 10 to 18 flowers; fruits mostly from 2 to 3 inches long and about half an inch broad, dull-brownish outside; seeds scarcely a quarter of an inch long.

This species seems always to have been passed as *A. polybotrya;* but it differs essentially from that species in glabrous leaves, with usually less numerous and always shorter pinnules, the form of which gives a very peculiar aspect to the plant; in smaller and particularly narrower leaflets, with hardly any intervening spaces between them; in highly developed glandules on the rachis; in glabrous thinner and often also longer stalks of the headlets of flowers, with still smaller basal bracts; in deeper lobed corolla; in broader fruit not constricted between the seeds, further in probably larger arillar appendage, so far as can be judged from comparison of fruit of *A. polybotrya,* available here in a young state only. Stature, bark, wood and odour of flowers of the two trees may also be quite different. The height of the tree, so far as known, seldom exceeds 15 feet; the bark is of a greyish or slaty colour and smooth; the flowering time is about the earlier part of September.

The species is named in honour of Mr. F. M. Bailey, from whom flowering branchlets were received, taken at Brisbane

from a tree in Bowen's Park, the origin of which could not with certainty be traced. Somewhat later, fruiting specimens were sent by the Rev. Dr. Woolls, who got them from Mr. H. D. Coker of Brookfield, through Mr. John Dawson of Humberstone; he found this rare species only near Cootamundra on one of the sources of the Murrumbidgee and near To-morrow on a tributary of the Lachlan River on stony ridges up to an elevation of about 1600 feet. It must, however, be rare, as no other material pertaining to this species occurred formerly in the Museum Collections of Australian Plants, formed by me here since 1847. Quite recently *A. Baileyana* has been found also near Wagga Wagga by Messrs. Garland and Deane. *A. polybotrya* has a rather wide range, inasmuch as it is now known also from the vicinity of Keppel-Bay (Rev. Jul. Tenison Woods), from the sources of the Condamine River (E. Bowman), and from Drummond's Range (P. O'Shanesy). The bark is locally used for tanning; the flowers are pale yellowish.

Adjoined are some notes of unrecorded localities of various *Acacias*:—

Acacia triptera—near the Upper Darling River (Rev. H. Milne Curran).

Acacia cochlearis—Upper Kalgan River (F. v. M.), near Hampton Range (J. Forrest), near Esperance Bay and Russell Range (Dempster), near Cape Arid (Maxwell); also in Drummond's Collection 289. *A. latipes* seems a variety.

Acacia lanigera—Hume River (Ch. French, jun.)

Acacia genistoides—between the Gascoyne and Ashburton Rivers (E. Giles).

Acacia tenuifolia—near the Cann River (Edwin Merrall.)

Acacia rupicola—Wirrabara (J. R. Love), Kangaroo Island (Tepper).

Acacia oxycedrus—Lake Leake (Prof. Tate).

Acacia leptoneura—Sources of Swan River (Miss J. Wells), between the Murchison River and Juin (E. Giles); also in Drummond's collection under 303.

Acacia rigens—Gawler Ranges (C. Ryan), Murrumbidgee (F. v. M.)

Acacia scirpifolia—Upper Darling River (Rev. J. Milne Curran).

Acacia lycopodifolia—Thompson River (J. W. Birch), Macdonnell Ranges (E. Giles), Roebuck Bay (Martin), DeGrey River (Carey).

Acacia galioides—Dangar's Creek, Cape and Flinders Rivers (Bowman), Newcastle Range (Armit.)

Acacia Baueri—Richmond River (Fawcett), Fraser's Island (W. Hill).

Acacia bruniades—Minto's Craig (Rev. B. Scortechini).

Acacia conferta—Severn (C. Hartmann), Comet and Callan Rivers (O'Shanesy), between Clermont and Gainsford (Bowman), Lake Elphinestone, (Mrs. Dietrich.)

Acacia vomeriformis—near Ballarat (D. W. Spence), near Meredith (S. Johnson), Upper Ovens River (Mrs. M'Cann).

Acacia lineata—near the junction of the Ovens and Murray Rivers (C. French), near Cobar (Rev. J. M. Curran).

Acacia fasciculifera—Severn (C. Hartmann), between the Dawson and Burnett Rivers (F. v. M.)

Acacia falcata—Comet River (O'Shanesy), Mount Dromedary (Reader).

Acacia penninervis—New England (C. Stuart), Severn (Hartmann).

Acacia microbotrya—near Stirling's Range (F. v. M.), Irvin River (Miss Guerin).

Acacia vestita—Gulgong (Dr. Barnard).

Acacia stipulosa—King's Sound (A. Hughan), Fitzroy River (Maitl. Brown).

Acacia sclerophylla—Murrumbidgee (Tucker), Lachlan River (F. v. M.)

Acacia excelsa—Darling Downs (Law), Comet River and Blackwater Creek (O'Shanesy), Severn (Hartmann), Port Denison (Fitzalan), Walloon (Bowman), Flinders River F. v. M.)

Acacia binernata—Myall River (Fawcett).

Acacia alpina—Mount Bogong (J. Stirling), Mount Hotham (Rev. E. W. Nye).

Acacia cyperophylla—near Cobar (Rev. J. Milne Curran).

Acacia glaucescens—Apsley River (A. R. Crawford), Genoa, at 3000 feet (W. Baeuerlen).

Acacia elata—Hunter's River (Rev. Dr. Collett), sources of Barrington, Gloucester and Manning Rivers (Aug. Rudder), Apsley River (A. R. Crawford).

Acacia Mitchelli—near Portland Bay (Ch. Green), near Meredith (S. Johnson).

Acacia pentadenia—Shannon, where it attains a height of 30 feet (F. v. M.)

Acacia Gilberti—Warren River (Walcott), Blackwood River (F. v. M.); also Drummond 314.

Acacia nigricans—Porongerup (F. v. M.)
Acacia strigosa—Pinjarrah (Rev. J. S. Price), Shannon (F. v. M.)
Acacia Drummondi—Stirling's Range (F. v. M.), Blackwood River (Mrs. M'Hard), Greenough River (C. Grey); Drummond 315.
Acacia Farnesiana—Shark Bay (Mrs. Gribble.)
Acacia Bidwilli—Mitchell River (E. Palmer).

Grevillea Kennedyana.

Branchlets and leaves beset with short appressed greyish hairlets; leaves scattered or somewhat fasciculated, rigid, linear, entire, pungently pointed, revolute along the margin; flowers comparatively large, in axillary and terminal umbels; bracts fugacious; petals bright-red, about twice as long as the glabrous stalklets, only from much above the middle or near the summit reflexed, outside glabrous, inside extensively beset with tender whitish hairlets; torus elongated, almost in a straight line continuing the stalklet; hypogynous glandule semi-annular and also upwards protracted; pistil glabrous; ovulary conspicuously stipilate; style nearly half exserted; stigma lateral; fruit oblique-ellipsoid, pointed at the upper end, slightly granular-rough outside; seeds linear- or narrow-ellipsoid, channelled, greyish outside, with a short pale terminal appendage.

Between rocks on Grey's Ranges (W. Baeuerlen).

An ample shrub, attaining a height of about five feet, flowering downward even to near the base of the stem. Leaves mostly from $\frac{2}{3}$ to 1 inch long, with a single groove underneath, many of the leaves spreading. Umbels sessile, the flowers exuding a mellaginous fluid. Total length of petals nearly an inch, but apparently less through the terminal curvature. Fruit turgid, about $\frac{2}{3}$ inch long.

This beautiful plant is as yet only known from a single locality; it is dedicated to Mrs. M. B. Kennedy, of Wonnaminta, who not only contributed since some years to the writers collections, but also from her and her consort's hospitable home promoted the searches of the discoverer of this plant. In its affinity the newly found species approaches *G. acuaria*, but the leaves are much thicker and deeply grooved beneath, the flowers are much larger, the torus is proportionately far more extended, and the ovulary is not unilaterally and suddenly protruding as that

of *G. acucaria*, whereby already quite a different form of fruit is indicated. In general aspect our new plant is not dissimilar to *G. Huegelii*, the leaves of which however are always dissected, the flowers corymbously arranged, the petals outside, as well as the stalklets, invested with appressed shining hairlets, but inside glabrous, the style is less emerged and the fruit shorter, broader and compressed.

This seems an apt opportunity of bringing under notice the fruit of *G. anethifolia*, recently sent from the vicinity of Cobar by the Rev. J. Milne Curran. It is about $\frac{1}{3}$ inch long, suprabasally fixed to the slender stipes, oblique-ovate, turgid, slightly rough, but glabrous outside; the seeds are concave-convex, pale, oval and without any conspicuous expanding membrane.

Some other hitherto unrecorded notes on *Grevilleas* are added:

G. pterosperma occurs as far south as Lake Albacutya (Mr. Ch. French).

G. cirsüfolia was found on the summit of Mount Lindsay by Mr. W. Webb.

G. floribunda was noticed on the Severn by Mr. C. Hartmann.

G. ericifolia was gathered on the Ovens River by Mr. J. C. Martin, and near Mount Elgin by Mr. St. El. Dalton.

G. longistyla grows on the Upper Hunter River, according to Mr. L. Stephenson. As many as 21 segments have been counted on some of the leaves.

G. juncifolia was brought from the Berkeley Ranges by Mr. Adolph Wuerfel, from the Mulligan River by Mr. Cornish; from near the Darling and Lachlan Rivers, by Mr. Tucker.

G. Dryandri is now also known from near Port Darwin, through Mr. Holtze.

G. gibbosa extends to the Upper Thomson River (Mr. R. C. Burton). This species mediates the transit to the genus *Hakea*, its pericarp and seeds bearing much resemblance to those of *H. cycloptera* and *H. platysperma*.

G. trinervis has been detected in New England, near Walcha, by Mr. R. Crawford.

G. ramosissima has been sent from the Upper Lachlan River by Dr. Lauterer; from near Omeo by Mr. James Stirling; from near the Upper Ovens River by Mrs. M'Call; from near the Hume River by Mr. M'Kibbin.

G. Goodii was collected by Mr. Armit near the Robertson and Perry Rivers; fruit woody, broad-ovate, about ¾ inch long, pointed; seeds without any expanding membrane.

G. annulifera was traced to Shark Bay as well as *G. lencopteris* (F. v. M.)

G. striata was noticed as far south as Cobar by the Rev. J. M. Curran.

G. mimosoides advances eastward to the Palmer River, according to Mr. Wycliff.

G. Victoriæ was collected at Tooma by Miss Campbell.

Art. XVIII.—*Two Hitherto Unrecorded Plants from New Guinea.*

Described by Baron von Mueller.

Elaeocarpus Sayeri.

Tall-shrubby and straggling or finally arborescent; branchlets slender, as well as leaf-stalks and inflorescence much beset with greyish short soft hairlets; leaves comparatively small, firm, conspicuously stalked, mostly ovate-lanceolar and gradually long acuminated, rounded at the base, remotely serrulate-crenulated, almost glabrous, their costular venules prominent beneath, the ultimate venules closely reticular-connected; racemes short; flowers comparatively small; stalklets recurved, slender, longer than the flowers; petals about as long as the sepals, whitish, upwards broader, beset with appressed shining hairlets particularly outside, acutely fringed at and towards the summit; stamens from 12 to 22, slightly invested with minute hairlets; filaments about half as long as the cells of the anthers; terminal bristlet of the latter conspicuously curved; pistil beset with a somewhat velvet-silky vestiture; ovulary attenuated gradually into the conical-filiform style, two-celled; torus conspicuously raised. On Mount Obree, at an elevation of about 7000 feet (Cuthbertson and Sayer).

E. Munroi, which among the numerous congeners comes nearest to the new species above defined, differs in tall arboreous stature, want of general vestiture, leaves much paler beneath, larger flowers, more slender style and possibly also in fruit. *E. Græffei* is separated from the new Papuan congener by much larger leaves, quite short pedicels, some-